US009304285B2

(12) **United States Patent**
**Barbour et al.**

(10) **Patent No.: US 9,304,285 B2**
(45) **Date of Patent: Apr. 5, 2016**

(54) **CATHETERIZATION AID FOR WOMEN**

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( * ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **14/469,868**

(22) Filed: **Aug. 27, 2014**

(65) **Prior Publication Data**

US 2015/0062729 A1 Mar. 5, 2015

**Related U.S. Application Data**

(60) Provisional application No. 61/870,873, filed on Aug. 28, 2013.

(51) **Int. Cl.**

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|---|---|
| ***G02B 7/182*** | (2006.01) |
| ***F21V 33/00*** | (2006.01) |
| ***A61M 25/01*** | (2006.01) |
| ***A47G 1/16*** | (2006.01) |
| ***F16M 1/00*** | (2006.01) |

(52) **U.S. Cl.**

CPC ***G02B 7/182*** (2013.01); ***A47G 1/16*** (2013.01); ***A61M 25/01*** (2013.01); ***F16M 1/00*** (2013.01); *A61M 2209/084* (2013.01); *F21V 33/004* (2013.01)

(58) **Field of Classification Search**

CPC ..... G02B 7/182; F21V 33/004; A61M 25/01; A47G 1/16

USPC ..... 359/872, 875, 880, 881, 882, 900; 362/139, 142, 144; 248/471, 472, 474, 248/479, 481

See application file for complete search history.

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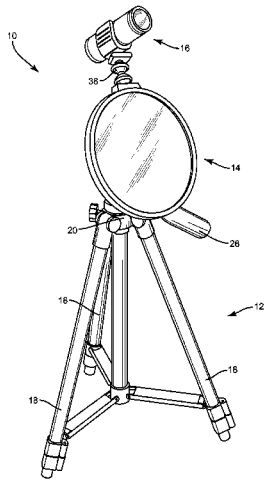
(57) **ABSTRACT**

A self-catheterization aid for a woman that comprises a tripod. Mounted to the tripod is a mirror that can be moved and adjusted in various planes. Mounted to the mirror is a battery-powered light. The device enables a woman to appropriately position the self-catheterization device such that the mirror and light is aimed at the urethra area. This enables the woman to clearly see the inlet to the urethra which in turn facilitates self-catheterization.

**11 Claims, 3 Drawing Sheets**



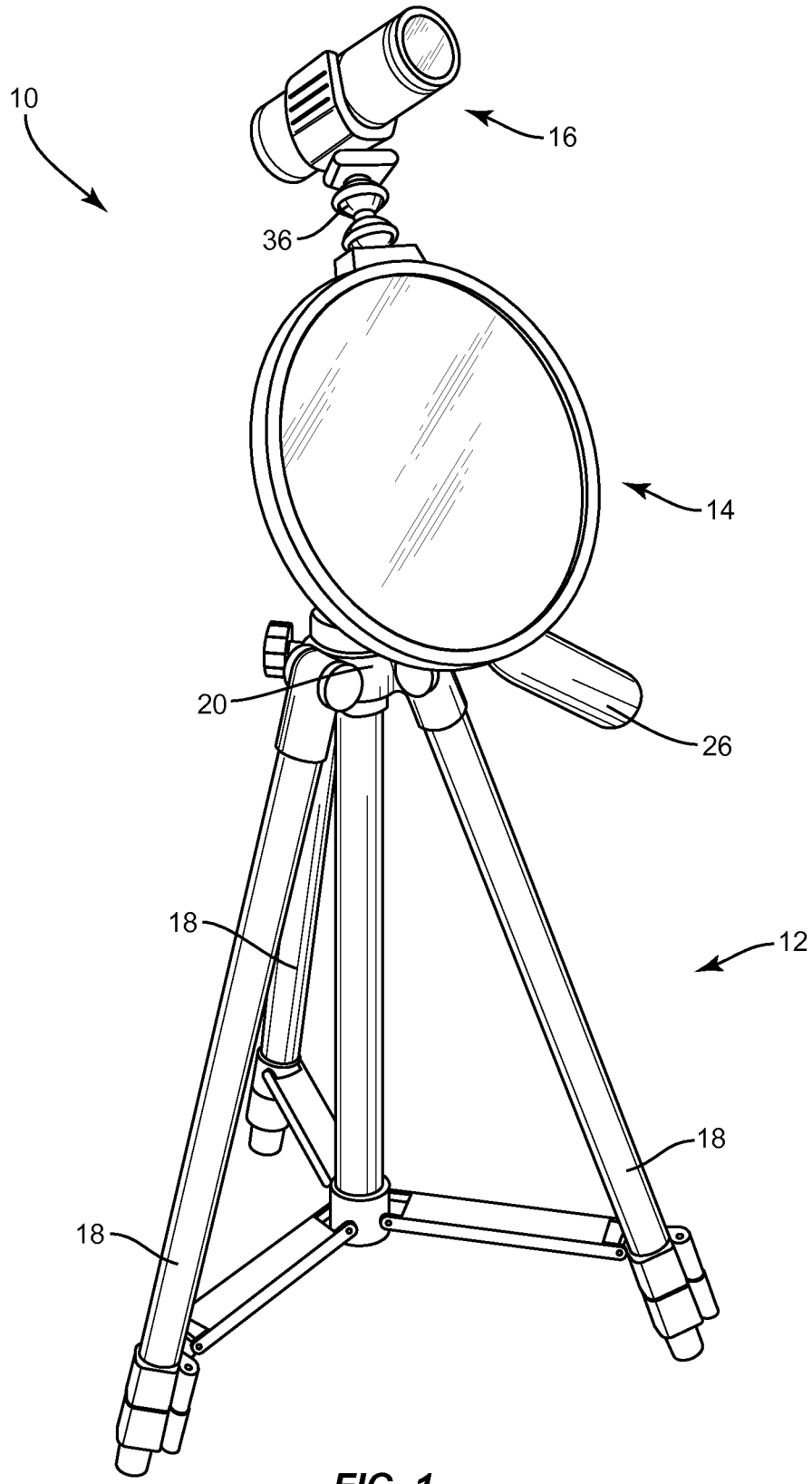



FIG. 1

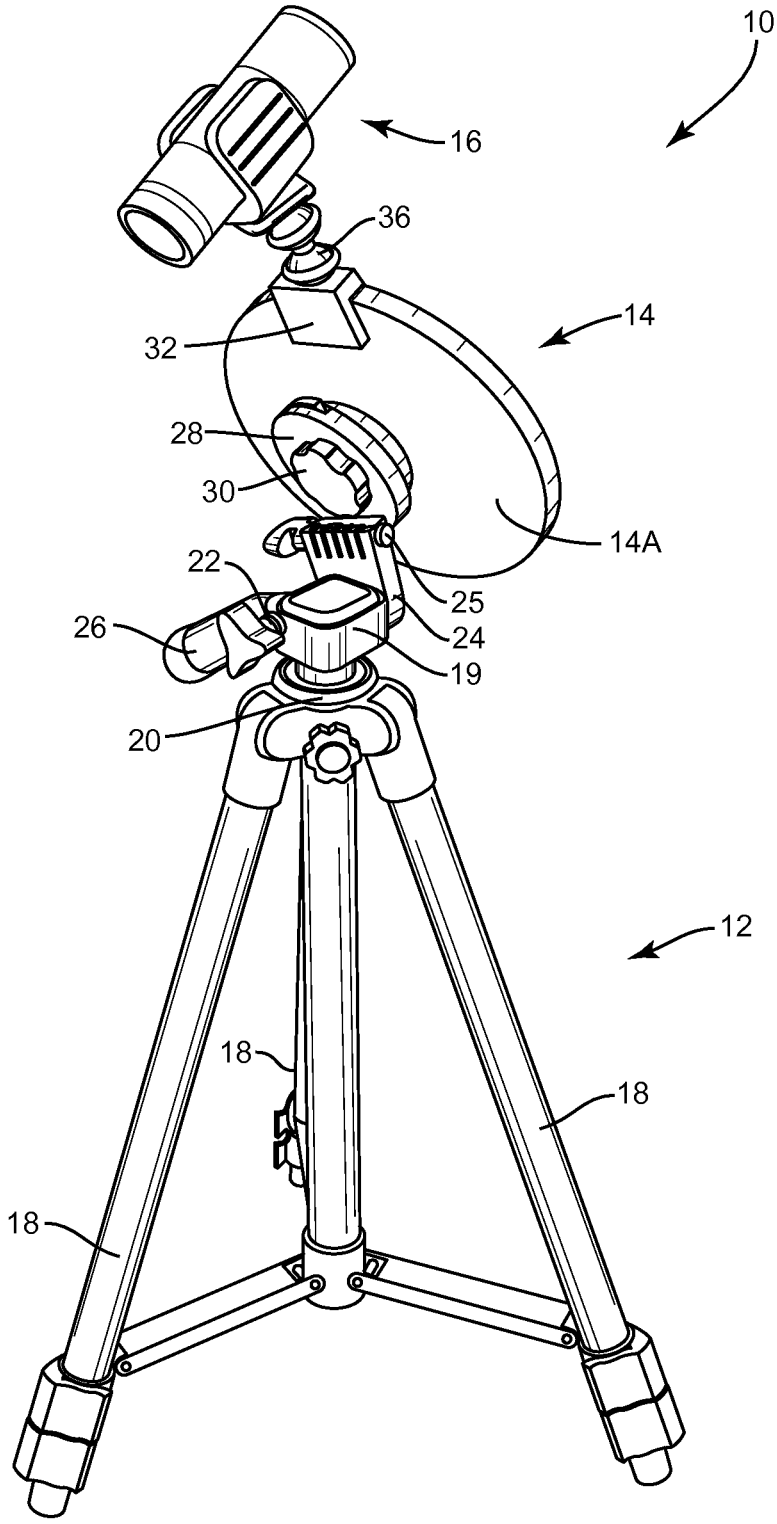



*FIG. 2*

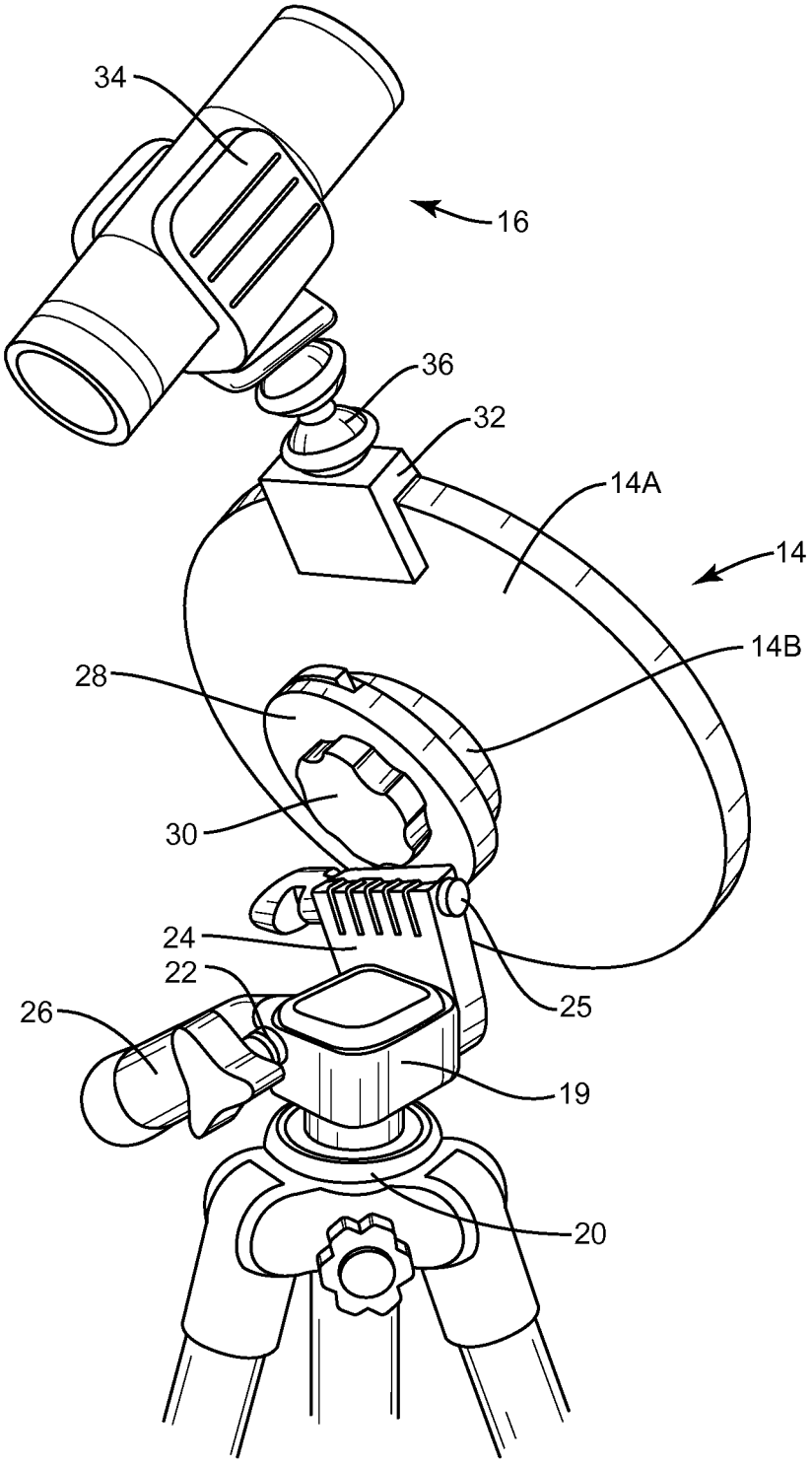



*FIG. 3*

# CATHETERIZATION AID FOR WOMEN

This application claims priority under 35 U.S.C. §119(e) from the following U.S. provisional application: Application Ser. No. 61/870,873 filed on Aug. 28, 2013. That application is incorporated in its entirety by reference herein.

## FIELD OF THE INVENTION

The present invention relates to medical devices, and more particularly to a device that assists a woman in performing self-catheterization.

## BACKGROUND OF THE INVENTION

A person's bladder functions to collect and hold urine, and from time-to-time, the bladder functions to evacuate the urine. Some people have a condition that is sometimes referred to as urinary retention. This simply means that the bladder is unable to evacuate urine.

There are a number of treatments for urinary retention. One approach or solution to this problem involves intermittent self-catheterization where, in the case of a woman, the woman catheterizes herself periodically. This is generally recognized as a safe and effective way for women to deal with urinary retention.

There is one problem with self-catheterization involving a female. Because of the anatomical position of the inlet opening of the female urethra, it is difficult for a woman to self-catheterize herself.

There has been and continues to be attempts at designing aids for assisting women with self-catheterization. For the most part, the approaches of the prior art have fallen short for one reason or another. For example, it is known to provide a vaginal insert that has an associated catheterization guide. To use this device, the woman inserts the device into her vagina with the idea that the associated guide will align with her urethra. In many cases, the guide will not properly align with the woman's urethra and, hence, the device is of little or no use and only leads to frustration.

Therefore, there has been and continues to be a need for a simple and easy-to-use catheterization aid for females that will enable a female to easily and quickly execute self-catheterization.

## SUMMARY OF THE INVENTION

The present invention entails a self-catheterization aid for a woman that comprises a support that, in one embodiment, is a tripod. Mounted to the support or tripod is a mirror that can be moved and adjusted in various planes. Mounted to the mirror is a battery-powered light. This device enables a woman to appropriately position the self-catheterization aid or device such that the mirror and light are aimed at the vaginal area, including the urethra area, resulting in the area being visible to the woman via the mirror. This enables the woman to clearly see the inlet to the urethra, which in turn facilitates self-catheterization.

In one embodiment, the present invention includes a self-catheterization aid for a woman which includes an adjustable tripod with a series of legs and a top. A sleeve is mounted to the top of the tripod and the shaft is supported within the sleeve and includes an axis. A carrier is connected to the shaft and rotatable about the axis of the shaft. A handle projects from the carrier for manipulating the carrier. The carrier includes an adjustable mirror mount that is pivotally connected on the carrier. A mirror is mounted to the mirror mount. An electric powered light is mount to the mirror. The mirror and light can be adjusted by actuating the handle and moving the carrier or by adjusting the mirror mount relative to the carrier.



In another embodiment, there is provided a method of assisting a woman in inserting a catheter into the urethra of the woman. This method includes positioning a self-catheterization aid such that the self-catheterization aid is aligned with a urethra area of a woman. The method further includes adjusting the position of a mirror forming a part of the self-catheterization aid such that the urethra area is reflected in the mirror. Further, the method includes directing a beam of light from the self-catheterization aid onto the urethra area and forming a reflection of the urethra area in the mirror. Further, the method includes guiding a catheter into the urethra wherein the reflection of the urethra area in the mirror assists the woman in executing self-catheterization.

In another embodiment, the present invention includes a self-catheterization aid for assisting a woman in inserting a catheter into her urethra. The self-catheterization aid comprises an adjustable support having an upper portion and a plurality of legs extending from the upper portion wherein each leg is moveable back and forth between an inner collapsed position and an outer expanded position. The self-catheterization aid includes a carrier mounted above the upper portion of the adjustable support wherein the carrier is movably mounted relative to the adjustable support. The carrier further includes a mirror mount. In addition, there is a mirror mounted to the mirror mount. A light is mounted to the mirror for directing a light beam away from the mirror and onto the urethra area of the woman.

Other objects and advantages of the present invention will become apparent and obvious from a study of the following description and the accompanying drawings which are merely illustrative of such invention.

## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of the self-catheterization aid of the present invention.

FIG. **2** is another perspective view of the self-catheterization aid viewed from a different angle.

FIG. **3** is a fragmentary perspective view showing a top portion of the self-catheterization aid.

## DESCRIPTION OF EXEMPLARY EMBODIMENT

With further reference to the drawings, the self-catheterization aid is shown therein and indicated generally by the numeral **10**. As will be appreciated from viewing the drawings, the self-catheterization aid or device **10** comprises three basic components: a support structure **12**, a mirror **14**, and a light **16**. As seen in the drawings, the mirror **14** is mounted to the support structure **12** and the light, in turn, is mounted to the mirror.

The support structure **12** can vary in design. More particularly, the support structure **12** can assume various forms which can support the mirror **14** and light **16**. Support structure **12** should be stable when positioned on a support. Its height preferably should be adjustable. Further, the support structure **12**, in a preferred embodiment, should be lightweight, compact and easy to carry. Preferably, the design of the self-catheterization aid **10** is such that it can be packaged and carried by the woman in an inconspicuous manner. The support structure **12** can be collapsed such that the structure as a whole can be transformed into a compact design that can be

contained within a small carrying bag or case. Finally, the support structure **12** should be easy to handle and manipulate.

One design for the support structure **12** is in the form of a tripod. The tripod design is shown in the accompanying drawings. The tripod includes a series of legs **18**. Each leg may be telescoping such that the entire device **10** can be adjusted for height. Each leg **18** is connected at an upper end to a top connector or plate **20**. Legs **18** are mounted to the underside of a top connector **20** such that the legs can be moved inwardly and outwardly. Support structure **12** with the inwardly and outwardly moving legs **18** can be positioned in a compact configuration by moving the legs **18** inwardly to where the legs lie directly adjacent each other. This enables the catheterization aid to be packaged in a flexible bag and wherein the bag can, in turn, be placed in a purse carried by the woman.

Mounted to the top connector **20** is a sleeve or block s**19**. A shaft **22** is rotatable in the block **19**. A carrier **24** is rotatably mounted on the shaft **22**. Projecting from the carrier **24** is a handle **26**. As seen in the FIGS. **2** and **3**, the carrier **24** includes a bifurcated portion. A pivot pin **25** is connected across the bifurcated portion of the carrier **24**. A mirror mount **28** is pivotally connected on the pivot pin **25** on the carrier **24**. The mirror **14** is mounted to the mirror mount **28**. In particular, mirror **14** includes a back face **14**A. Formed on the back face **14**A of the mirror is a center boss **14**B. Center boss **14**B is threaded. There is provided a thumbscrew **30** that projects through an opening in the carrier **24** and screws into the threaded center boss **14**B. That is how the mirror is supported on the support structure **12**.

It will be appreciated by those skilled in the art that there are various ways of supporting the mirror **14**. In lieu of the mirror mount **28** and thumb screw **30** shown in the drawings, there could be provided a quick attach-detach mechanism for connecting the carrier **24** to the mirror **14**. Various quick attach and detach mechanisms can be used.

There is provided an L-shaped mounting bracket **32** that is mounted to the back face **14**A of the mirror **14**. A ball mount **36** is secured to a portion of the L-shaped bracket **32**. A cradle **34** is secured on the ball mount **36**. As seen in the drawings, the light **16**, which is a battery-powered light, is elongated and seats in the cradle **34**. In one embodiment, the light **16** includes a central area that is designed to frictionally fit in the cradle **34**.

By moving the handle **26**, the mirror **14** and light **16** can be articulated back and forth. That is, the mirror **14** and the light **16** can be moved and adjusted by rotating the support shaft **22** within block **19**. Besides rotating about the axis, both the mirror **14** and light **16** can rotate about the pivot pin **25** provided in the carrier **24**. This, of course, enables the mirror **14** and the light **16** to rotate about two separate axes and greatly facilitates the adjustment of the device when being used for self-catheterization. There is also a substantial adjustment provided for the light **16**. The ball mount **36** enables the light **16** to be rotated about an infinite number of axes on the upper portion of the ball mount.

In use, the device **10** of the present invention is utilized by a woman to assist her in properly inserting a catheter into her urethra. Thus, the device **10** is positioned with respect to the woman such that the area around the urethra is reflected by the mirror **14** in such a fashion that the area around the urethra can easily be seen. Further, in order to facilitate self-catheterization, the battery-powered light is turned on and adjusted so as to direct a light beam onto the area around the opening to the urethra. This beam of light creates a clear reflection of the urethra area in the mirror **14** and enables the woman to see clearly the inlet to her urethra and to manipulate the catheter.

As seen in the drawings, the device **10** is relatively small and compact and can be easily packaged in a small flexible bag and carried on the person. In some cases, it may be desirable to provide a larger support structure for use in the home.

The device of the present invention is especially useful to a woman when she begins to employ self-catheterization. Over a period of time, with the assistance of the device of the present invention, a person will become more adept at self-catheterization and eventually may not need the aid that is provided by the present invention. That is, it is possible that, after repeated self-catheterizations, a person will be able to achieve such simply because of repeated catheterization exercises.

The present invention may, of course, be carried out in other specific ways than those herein set forth without departing from the scope and the essential characteristics of the invention. The present embodiments are therefore to be construed in all aspects as illustrative and not restrictive and all changes coming within the meaning and equivalency range of the appended claims are intended to be embraced therein.

What is claimed is:

**1**. A self-catheterization aid for a woman comprising:
- an adjustable tripod with a series of legs and a top;
- a sleeve mounted to the top of the tripod;
- a shaft supported in the sleeve and including an axis;
- a carrier connected to the shaft and rotatable about the axis of the shaft;
- a handle projecting from the carrier for manipulating the carrier;
- wherein the carrier includes an adjustable mirror mount that is pivotally connected on the carrier;
- a mirror mounted to the mirror mount;
- an electric powered light mounted to the mirror;
- wherein the mirror and light can be adjusted by actuating the handle and moving the carrier or by adjusting the mirror mount relative to the carrier; and
- wherein the mirror mount is pivotally connected to the carrier via a pivot pin.

**2**. The self-catheterization aid of claim **1** wherein the mirror includes a back face, a threaded boss secured on the back face of the mirror; and wherein there is provided a threaded screw that projects from the carrier and is threaded into the threaded boss.

**3**. The self-catheterization aid of claim **2** wherein the threaded screw includes a thumb screw that projects through a portion of the carrier into the threaded boss.

**4**. The self-catheterization aid of claim **1** further including a bracket secured to the mirror; a ball joint secured to the bracket; a cradle secured to the ball joint; and wherein the electric power light is secured within the cradle.

**5**. A self-catheterization aid for assisting a woman in inserting a catheter into her urethra, the self-catheterization aid comprising:
- an adjustable support having an upper portion and a plurality of legs extending from the upper portion and wherein each leg is moveable back and forth between an inner collapsed position and an outer expanded position;
- a carrier mounted above the upper portion of the adjustable support wherein the carrier is movably mounted relative to the adjustable support;
- the carrier including a mirror mount;
- a mirror mounted to the mirror mount;
- a light mounted to the mirror for directing a light beam away from the mirror;

wherein the carrier is bifurcated and includes a main portion and the mirror mount and wherein the mirror mount is pivotally mounted to the main portion via a pivot axis; and

wherein the mirror includes a back face having a threaded boss and wherein the mirror mount of the carrier includes a thumb screw that is threaded into the boss so as to secure the mirror to the carrier.

**6**. The self-catheterization aid of claim **5** including a U-shaped cradle for receiving and holding the light and wherein the cradle is supported on the mirror.

**7**. The self-catheterization aid of claim **6** wherein there is provided at least one ball joint operatively interconnected between the mirror and the cradle for enabling the cradle and the light held thereby to be adjusted relative to the mirror.

**8**. The self-catheterization aid of claim **7** wherein the ball joint is supported on an L-shaped bracket secured to the back side of the mirror.

**9**. The self-catheterization aid of claim **5** including a sleeve secured to the upper portion of the adjustable support; and a shaft contained within the sleeve and wherein the carrier is secured to the shaft.

**10**. The self-catheterization aid of claim **5** wherein the adjustable support includes a tripod including three legs with each leg extending from the upper portion and being secured into the upper portion of the tripod such that the legs can move back and forth between the collapsed and expanded positions.

**11**. A self-catheterization aid for a woman comprising:

an adjustable tripod with a series of legs and a top;

a sleeve mounted to the top of the tripod;

a shaft supported in the sleeve and including an axis;

a carrier connected to the shaft and rotatable about the axis of the shaft;

a handle projecting from the carrier for manipulating the carrier;

wherein the carrier includes an adjustable mirror mount that is pivotally connected on the carrier;

a mirror mounted to the mirror mount;

an electric powered light mounted to the mirror;

wherein the mirror and light can be adjusted by actuating the handle and moving the carrier or by adjusting the mirror mount relative to the carrier; and

wherein the mirror includes a back face, a threaded boss secured on the back face of the mirror; and wherein there is provided a threaded screw that projects from the carrier and is threaded into the threaded boss.

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